REMARKS

The specification and claims have been amended to improve the style of this application.

Claims 1 - 4 and 6 have been rejected as being anticipated by Sarma.

New claim 20 has been added which is a product by process claim. Since a product by process claim is claiming a product, claim 20 and its dependent claims fall within the restriction requirement.

New claim 20 sets forth the separate steps of providing a carrier film and providing electrically conductive connection strands. In the embodiment of the present drawings, the carrier film was represented by reference 11, and the connection strands by references 12 and 13. As shown especially in Fig. 7, connection strands 12 and 13 are provided separately from the carrier film 11. The connection strands are therefore separate and independent structures from the carrier film. Applicant has reviewed Sarma, and finds no teaching nor suggestion of connection strands which are separate and independent structures from a carrier film. The rejection equates element 409 in Fig. 9 of Sarma with the carrier film of the present invention. Elements 509 of Sarma are equated with the connection strands of the present invention. Applicant has reviewed Sarma, and notes that the elements in Fig. 9 have corresponding parts in Fig. 1 where Fig. 9 has the number "9" added to the last digit of the corresponding part in Fig. 1. This equates element 509 of Sarma with element 50 of Sarma. Applicant's review of Sarma finds that element 50 represents printed conductors, column 3 line 35 and lines 55 - 59. It appears that conductors 50 start off as a paste or ink which is then printed or deposited on the printed circuit board, and then fired to firmly adhere the ink or paste to the printed circuit

board. Therefore elements 50 and 509 of Sarma are not separate and independent conductive strands from a carrier film. Instead elements 50 and 509 of Sarma therefore depend on the printed circuit board and the firing in order to form conductors. Elements 50 and 509 of Sarma therefore do not fully anticipate the connection strands of claim 20. Claim 20 therefore cannot be anticipated by Sarma.

The separate connection strands are an important feature of the present invention. Because the connection strands are separate and independent from the carrier film, manufacturing the chip carrier arrangement of the present invention can also be performed separately and independently. The connection strands can be formed in a separate process, and in a separate location from the carrier film. The chip carrier of the present invention can then be formed by bringing together the carrier film and the connection strands separately and independently of how the connection strands were formed. This allows the final step in the present invention to take place much faster and with less effort. Applicant has found that forming the connection strands separately and independent from the carrier film is more efficient and reduce costs. The present invention is therefore an improvement over the prior art, and Applicant respectfully requests patent protection for this improvement.

In particular Applicant requests patent protection for chip carrier arrangements where the connection strands are separate and independent elements from the carrier film. In the reference of Sarma, elements 50 and 509 are formed from a paste which is then printed on to a circuit board, and then fired. This requires the presence of the printed circuit board and can slow the whole process of Sarma down so that it is less efficient than the present invention.

Chip carriers manufactured according to the present invention, would be structurally different than those of Sarma, since elements 50 and 509 of Sarma are not separate and independent from a carrier film.

Claim 6 has been amended to also set forth that the connection strands are independent and separate elements from the substrate. Therefore, as described above, claim 6 also cannot be anticipated by Sarma. Claim 6 is therefore also allowable.

New claim 15 depends from claim 1 and also sets forth that the connection strands are independent and separate elements from the substrate. Claim 15 therefore also defines over the prior art and is allowable.

Claim 1 has been amended to set forth that the connection strands are arranged on the substrate and extend over an entire longitudinal dimension of the substrate. As one can see in Fig. 1 of the present application, the connection strands 12 and 13 extend over the entire longitudinal dimension of the substrate or carrier film. Applicant has reviewed Sarma, and finds no teaching nor suggestion of elements 50 or 509 extending over an entire longitudinal dimension of a carrier film, or element 409. From Fig. 4 of Sarma, it is quite clear that elements 50 or 504, or even 509 as in Fig. 9, are not meant to extend over an entire longitudinal dimension of a substrate, but instead are to only partially extend over circuit board. Therefore elements 50, 504 and 509 of Sarma cannot anticipate the connection strands of claim 1. Claim 1 therefore defines over Sarma.

Claim 20 also sets forth that the connection strands extend over an entire longitudinal dimension of the carrier film. Claim 20 therefore further defines over the prior art.

Claims 16 - 19 and 24, 25 and 27 set forth that the carrier film and the conductive strands have a flexibility to be wound into a roll or rolls. This is shown in the embodiment of present Fig. 7 by the carrier film 11 being wound into a roll 30, the connection strands 12 and 13 being wound into separate rolls 33 and 34, and the combination of the carrier film with the attached connection strands 12 and 13 being wound into a roll 32. Applicant has reviewed Sarma, and finds no teaching nor suggestion of using a carrier film that has the flexibility to be wound into a roll. Therefore these claims further define over Sarma.

The flexibility of the carrier film, the connection strands, and the combination of carrier film with attached connection strands is another important feature of the present invention. The winding of these films and strands into rolls makes it much easier to manufacture the chip carrier. The carrier film and strands can be manufactured in separate locations, and wound into rolls. The carrier film and strand rolls can then easily be brought to a single location and combined into another roll, where that another roll can then be sent to another location to have the chips put on to the chip carrier. Each location therefore can specialize in one process or operation which makes each process or operation more efficient. This feature of the film and strands being windable into rolls is especially beneficial when combined with the feature that the carrier film with the attached strands is divided into individual substrates. The flexibility of the carrier film and the strands of the present invention is therefore a structural feature which provides for easier and more efficient manufacturing. The prior art does not have this structural feature of the flexibility, and therefore these claims define over the prior art. Furthermore, Applicant finds no suggestion or motivation which would lead a person of ordinary skill in the

art to modify Sarma to have this flexibility.

Applicant has reviewed Sarma, and notes that with regard to Fig. 9 of Sarma, column 9 lines 24 and following discloses a "printed circuit board assembly 109..." which is "very similar to assembly 10 of Fig. 1". The part of the description referring to Fig. 1, i.e. column 3 lines 29 - 62, clearly indicates the substrate being made from a "suitable insulating material, such as alumina (Al_2O_3)" (lines 50 and 51), and, beyond that, the "from the adhered conductors 50... formed by depositing a patterned layer of a suitable ink or paste that, after firing, provides a firmly adhering conductive pattern..." (lines 54 - 57). Alternatively, column 9 line 57, discloses "epoxy" as the material chosen for the substrate. Based on the common understanding of the constitution of a "printed circuit board" and supported by the aforementioned disclosed alternatives for the board material, there is no teaching nor suggestion that the substrate disclosed by Sarma is a film substrate characterized by a flexible constitution. Therefore it would not be obvious to modify Sarma to suggest the flexibility of the present claims.

Claim 5 has been rejected as being obvious over Sarma in view of Hashimoto.

The rejection states that Figs. 7 and 8 of Hashimoto teach connection strands 20 connected with terminals of a coil unit. Applicant has reviewed Figs. 7 and 8, and find no teaching nor suggestion of a coil unit, especially a coil unit with terminals. Applicant has also reviewed the text of Hashimoto, and finds no teaching nor suggestion of "terminals of a coil unit". Applicant notes that Hashimoto describes reels 37 and 38, however these are not coil units, especially coil units as set forth in the present application. Applicant has amended claim

5 to indicate that the coil unit is an electronic coil unit. This further differentiates the coil unit from the reels 37 and 38 in Hashimoto. Claim 5 therefore further defines over the prior art.

If the Examiner has any comments or suggestions which would further favorable prosecution of this application, the Examiner is invited to contact Applicant's representative by telephone to discuss possible changes.

At this time Applicant respectfully requests reconsideration of this application, and based on the above amendments and remarks, respectfully solicits allowance of this application.

Respectfully submitted
for Applicant,

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Enclosed: Petition for One Month Extension of Time

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